

Claim Listing

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Withdrawn – Currently Amended) A method for producing the plant of claim 20 comprising transforming a plant cell with an miRNA precursor construct, said construct comprising a promoter functional in a plant cell, wherein the promoter is operably linked to a nucleotide sequence encoding an isolated plant miRNA precursor, wherein the isolated plant miRNA precursor has been modified by

(a) replacing an endogenous miRNA sequence of the isolated plant miRNA precursor with an exogenous miRNA sequence that maintains the length of the endogenous miRNA sequence; and

(b) modifying nucleotides opposite the exogenous miRNA sequence in the isolated plant miRNA precursor to maintain double strandedness and mismatches of the isolated plant miRNA precursor,

and further wherein the exogenous miRNA sequence is complementary to a target mRNA sequence within said plant and, following processing from said precursor, hybridizes with the target mRNA sequence, whereby the expression of the target sequence is reduced.

2. (Withdrawn – Previously Presented) The method of claim 1, wherein said target sequence is an endogenous plant sequence.

3. (Withdrawn – Previously Presented) The method of claim 1, wherein said target sequence is an exogenous sequence.

4. (Withdrawn – Previously Presented) The method of claim 1, wherein said target sequence is selected from the group consisting of genes involved in the synthesis and/or degradation of proteins, peptides, fatty acids, lipids, waxes, oils, starches, sugars, carbohydrates, flavors, odors, toxins, carotenoids, hormones,

polymers, flavinoids, storage proteins, phenolic acids, alkaloids, lignins, tannins, celluloses, glycoproteins, and glycolipids.

5. (Withdrawn – Previously Presented) The method of claim 1, wherein said promoter is selected from the group consisting of a constitutive promoter, tissue-preferred promoter, and an inducible promoter.

6-19. (Canceled).

20. (Currently Amended) A plant stably transformed with an miRNA precursor construct, said miRNA precursor construct comprising a promoter functional in a plant cell, wherein the promoter is operably linked to a nucleotide sequence encoding an isolated plant miRNA precursor, wherein the isolated plant miRNA precursor has been modified by

(a) replacing an endogenous miRNA sequence of the isolated plant miRNA precursor with an exogenous miRNA sequence that maintains the length of the endogenous miRNA sequence; and

(b) modifying nucleotides opposite the exogenous miRNA sequence in the isolated plant miRNA precursor to maintain double strandedness and mismatches of the isolated plant miRNA precursor,

and further wherein the exogenous miRNA sequence is complementary to a target mRNA sequence within said plant and, following processing from said plant miRNA precursor, hybridizes with the target mRNA sequence, whereby the expression of the target sequence is reduced.

21-22. (Canceled).

23. (Currently Amended) A plant cell stably transformed with an miRNA precursor construct, said miRNA precursor construct comprising a promoter functional in a plant cell, wherein the promoter is operably linked to a nucleotide sequence encoding an isolated plant miRNA precursor, wherein the isolated plant miRNA precursor has been modified by

(a) replacing an endogenous miRNA sequence of the isolated plant miRNA precursor with an exogenous miRNA sequence that maintains the length of the endogenous miRNA sequence; and

(b) modifying nucleotides opposite the exogenous miRNA sequence in the isolated plant miRNA precursor to maintain double strandedness and mismatches of the isolated plant miRNA precursor,

and further wherein the exogenous miRNA sequence is complementary to a target mRNA sequence within said plant and, following processing from said plant miRNA precursor, hybridizes with the target mRNA sequence, whereby the expression of the target sequence is reduced.

24-25. (Canceled).

26. (Original) Transformed seed of the plant of claim 20.